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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

YEE, DEBORAH

ART UNIT

PAPER NUMBER

1793

MAIL DATE

DELIVERY MODE

03/13/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/582,830	Applicant(s) ASAHI ET AL.	
	Examiner Deborah Yee	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 January 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed January 13, 2009, with respect to the rejection(s) of claim(s) 1 to 22 under 35 U.S.C. 103(a) as being unpatentable over Canadian patent 2,429,439 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration and updated search, a new ground(s) of rejection is made.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1 to 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5,634,988 to Kurebayashi et al. ("US-988") alone or in view of CA 2,429,439 ("CA-439").

4. US-988 in claims 1 to 5 of column 14 discloses welded steel plate having a composition with constituents whose wt% ranges overlap those recited by the claims; and such overlap in wt% ranges establishes a prima facie case of obviousness because it would be obvious for one skilled in the art to select the claimed alloy wt% ranges over the broader disclosure of the prior art since the prior art teaches the same utility (welded structural components) and similar properties of high strength and low-temperature toughness and a bainitic microstructure of not less than 80 vol.%. See MPEP 2144.05.

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5. More specifically, US-988 in table 1 of columns 9-10 discloses one or more steel examples that closely meet the claimed composition; and when calculated, satisfy the claimed P-equation between 2.5 and 4.0 and the equation $Ti-3.4 > 0$. Even though the prior art does not teach the claimed equations, it does disclose that the prior art alloys possess the property Applicant attributes to the equations, which is low-temperature toughness. Also it is well settled that there is no invention in the discovery of a general formula if it covers a composition described in the prior art, *In re Cooper and Foley* 1943 C.D. 357, 553 O.G. 177.

6. Similar to present invention, US-988 on lines 8 to 16 in column 5 and table 4 of column 12 teaches welded steel having a bainitic microstructure at a fraction rate of not less than 80 vol.% in order to significantly improve in fatigue strength. The bainite structure comprises upper bainite which would include degenerate upper bainite as recited by the claims. Also prior art steel would be expected to contain degenerate bainite since claimed composition and its process of making are closely met, note examples 5 and 9 in Table 2 of columns 11-12 are subjected to cooling at 10°C/sec which is within Applicant's claimed cooling rate range of 1 to 10°C/sec necessary to obtain degenerate bainite.

7. Even though prior art does not teach steel having the ratio $(Hv-avep)/(Hv-M) = 0.8$ to 0.9, the yield ratio in the direction of rolling $(YS-Lp)/TS-Lp$ not greater than 0.8, circumferential tensile strength $TS-C$ between 900 and 1100 MPa, and the tensile strength in the longitudinal direction of line pipe not greater than 0.95 times the tensile strength in the circumferential direction as recited by one or more claims, such

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properties would be expected since composition and process of making are closely met and in absence of proof to the contrary.

8. In regard to the method of making steel plate, prior art claims 6 to 9 teach subjecting steel to hot rolling at recrystallization temperature of Ac_3 to $1250^{\circ}C$ (within claimed temperature range of 1000 to $1250^{\circ}C$) followed by hot rolling at the unrecrystallization temperature with a total cumulative reduction of 40 to 90% (overlaps claimed reduction rate of not less 75%) followed by cooling at a rate of 1 to $60^{\circ}C/sec$ (overlaps claimed cooling rate of 1 to $10^{\circ}C/second$) and cools until temperature reaches between $600^{\circ}C$ and room temperature (overlaps claimed cooling temperature of $500^{\circ}C$ or below).

9. The US-988 on lines 14- to 23 of column 1 teaches using weld steel plate for structural member such as offshore structures that would include seam welded pipe. Moreover, the present invention method of making line pipe comprising the steps of subjecting plate to UO process rolling to form pipe, seam welding to join pipe edges and expanding to shape welded pipe is conventional and known in the art (see CA-439, claim 15 on page 57); and therefore method would be obvious to apply to US-988 plate when making line pipe.

10. For the foregoing reasons, claims would not patentably distinguish over prior art.

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Deborah Yee whose telephone number is 571-272-1253. The examiner can normally be reached on monday-friday 6:00 am-2:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Deborah Yee/
Primary Examiner
Art Unit 1793

/DY/